

Work Order ID 131739

Tuesday, April 21, 2015 1:48:32 PM

131739

Page 1

Item ID: D4092-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Maintenance Step

Start Date: 4/20/15 Start Qty: 3.00

3

Cust Item ID:

Required Date: 4/20/15 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals: Process Plan: MLS Date: 15-04-22 Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4092	B

100 Cut blanks as per folio

0.00

100

Bandsaw

Memo

0.00

Jeaspa Bandsaw

3 Ø
DAS
40
9-89
15/05/22

110

0.00

110

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Mill as per Dwg and Folio FA935

Dwg Rev: B

Folio rev: AA

Deburr

****Grind flush transition machining mark after machining bottom of extrusion, see detail A.****

3 Ø
DAS
40
9-89
15/05/26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 3

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 Start Date: 4/20/15 Start Qty: 3.00 ***3*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155 *155* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch <u>11132036</u> Memo	0.00				<u>X3</u>	<u>4</u>	<u>15/06/01</u>	
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00				<u>3X</u>		<u>15/06/01</u>	DAS 36 9-89
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <u>G-A</u> <u>h/p</u> <u>131800</u> Memo	0.00				<u>3X</u>		<u>15/06/01</u>	DAS 36 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 4

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Revision ID:
Item Name: Maintenance Step Stop ***NS2***
Start Date: 4/20/15 Start Qty: 3.00 ***3*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

15/6/2 JH
ME
15-6-2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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OTHER : _____																					

Picklist Print

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Page 1

Work Order ID: 131739

131739

Parent Item: D4092-1

D4092-1

Parent Item Name: Maintenance Step

Start Date: 4/20/15

Required Date: 4/20/15

Start Qty: 3.00

Required Qty: 3.00

Comments: Ipp Rev:A New Issue 10-05-31 JLM Verified By:DD
REV:B AS PER ECN 11-639 JLM VERIFIED BY:DD

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2761-108		Manufactured	No			100	f	187.2500	2.5	8			

D2761-108

Extrusion (HPK)

15/05/22 DAS
40
9-89

Location

Loc Qty

Loc Code

MAT051

187.25

80206

187.25

17.80

DQA: _____ Date: _____



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OTHER : _____					

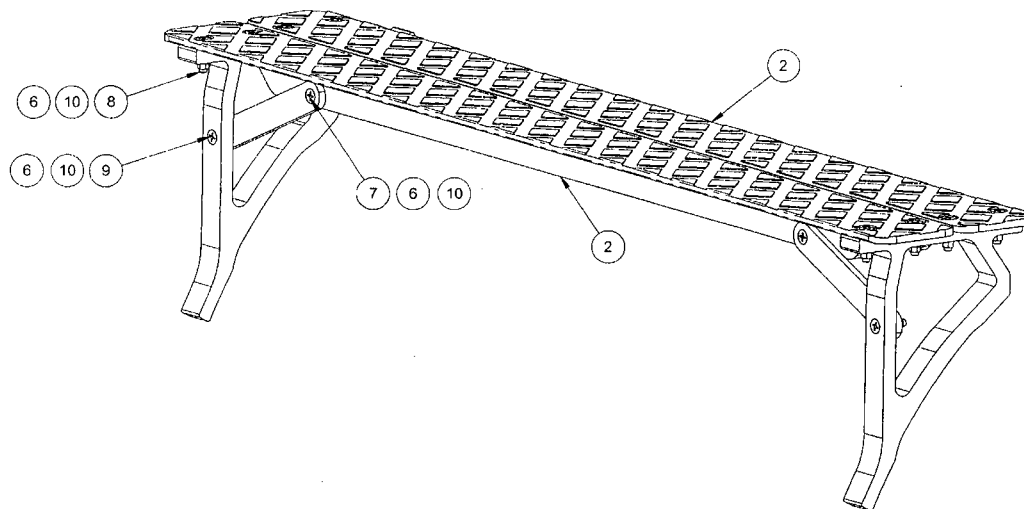
DART AEROSPACE LTD		Work Order: 131739
Description: Maintenance Step		Part Number: D4092-1
Inspection Dwg: D4092	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
30.06	+/-0.030	30.03	✓		MTAG	PHD-11
0.19	+/-0.030	.182	✓		VERW	PHD-12
1.25	+/-0.030	1.249	✓		"	"
1.38	+/-0.030	1.372	✓		H G	31003
0.25	+/-0.030	.243	✓		VERW	PHD-12
R0.25	+/-0.030	.250	✓		RAC G	
2.50	+/-0.030	2.499	✓		VERW	PHD-12
Ø0.201	+0.005/-0.001	.202	✓		"	"
0.30	+/-0.030	.297	✓		"	"
4.78	+/-0.030	4.780	✓		H G	31002
1.69	+/-0.030	1.69	✓		VERW	PHD-12
2.96	+/-0.030	2.96	✓		"	"
0.030	+/-0.010	.037	✓		MIC	PHD-09
0.20	+/-0.030	.201	✓		VERW	PHD-12
0.50	+/-0.030	.500	✓		PIN G	
0.035	+/-0.010	.037	✓		MIC	PHD-09
0.390 x 100°	+/-0.010 x 0.5°	.391	✓		VERW	PHD-12
1.500	+/-0.130	1.499	✓		"	"
0.50	+/-0.030	.500	✓		"	"
1.25	+/-0.030	1.248	✓		"	"
0.69	+/-0.030	.683	✓		"	"
0.38	+/-0.030	.377	✓		"	"
0.69	+/-0.030	.683	✓		"	"

Measured by: DAS 40 9-89		Audited by: H.A. DAS 08 9-89	Preliminary Approval:
Date: 15/05/26		Date: 15/05/26	Date:

Rev	Date	Change	Revised by	Approved
A	12.05.15	New Issue	KJ	
B	13.06.18	Dimension 2.96 was 2.69	KJ	



D4092-041 MAINTENANCE STEP ASSEMBLY

B

ITEM	QTY -041	PART NUMBER	DESCRIPTION
1	X	D4092-041	MAINTENANCE STEP ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	1	D4093-1	BRACKET
4	1	D4093-3	BRACKET
5	2	D4093-5	BRACE
6	12	MS21042L3	NUT
7	2	MS24694-S54	SCREW
8	8	MS24694-S55	SCREW
9	2	MS24694-S56	SCREW
10	12	NAS1149D0332J	WASHER

STANDARD
KENT, WA
COPY
CONF

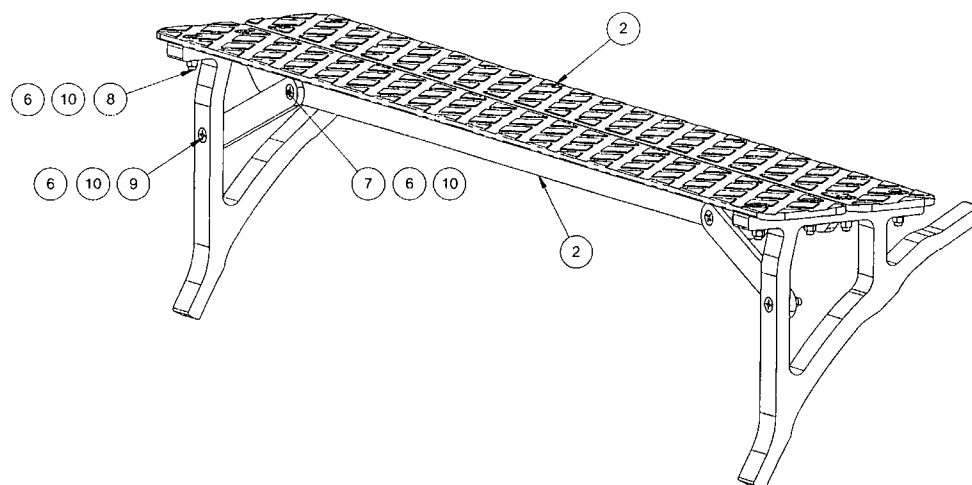
131739_MLS
1504-22

RELEASED
2011-09-22

B	REDRAWN: LOWERED FOR AESTHETICS	RF	11.07.27
A	NEW ISSUE	RF	10.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D4092	SHEET 1 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	MAINTENANCE STEP ASS'Y	NTS
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8 7 6 5 4 3 2 1

ITEM	QTY -042	P/N	DESCRIPTION
1	X	D4092-042	MAINTENANCE STEP ASSEMBLY
2	2	D4092-1	MAINTENANCE STEP
3	1	D4093-1	BRACKET
4	1	D4093-3	BRACKET
5	2	D4093-5	BRACKET
6	12	MS21042L3	NUT
7	2	MS24694-S54	SCREW
8	8	MS24694-S55	SCREW
9	2	MS24694-S56	SCREW
10	12	NAS1149D0332J	WASHER



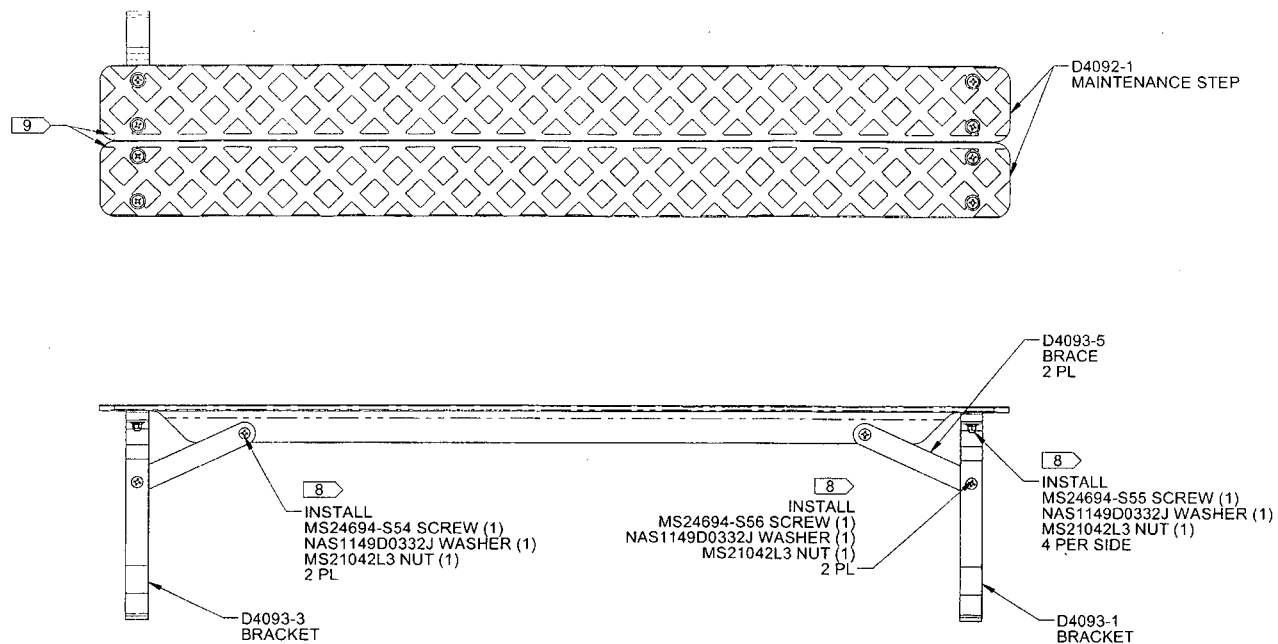
D4092-042 MAINTENANCE STEP ASSEMBLY



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2011-09-20
JW

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	MP	DRAWING NO.	REV. B
MFG. APPR.	MP	D4092	SHEET 2 OF 6
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	MAINTENANCE STEP ASS'Y	NTS
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8 7 6 5 4 3 2 1



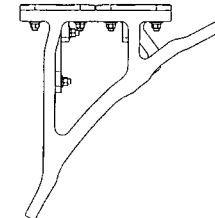
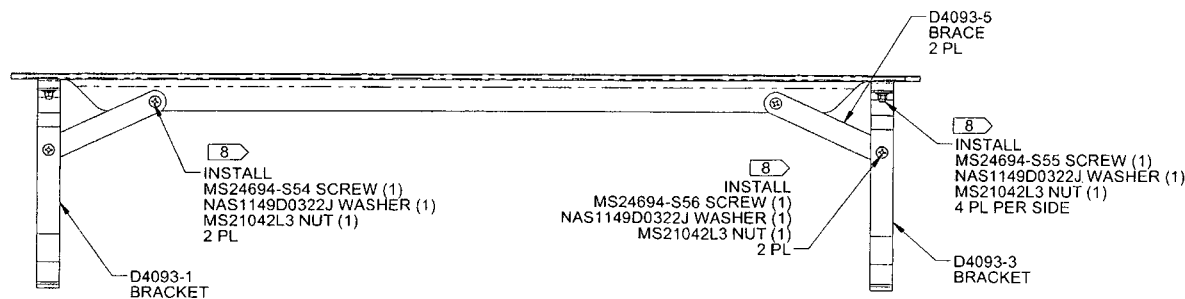
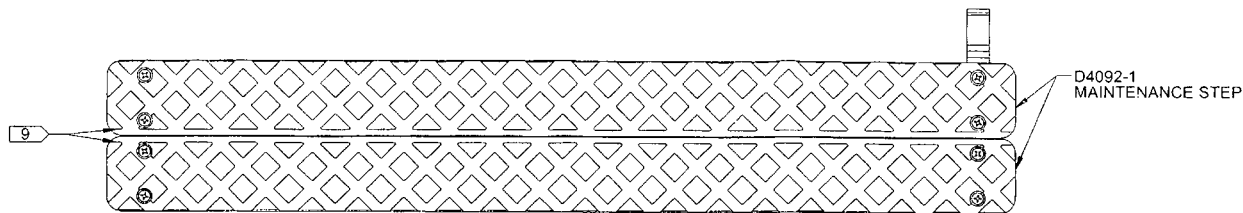
D4092-041 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.37 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

RELEASED
2011-09-22

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	REV. B
CHECKED	140	DRAWING NO. D4092	SHEET 3 OF 6
MFG. APPR.	21	TITLE	SCALE
APPROVED	140	MAINTENANCE STEP ASS'Y	NTS
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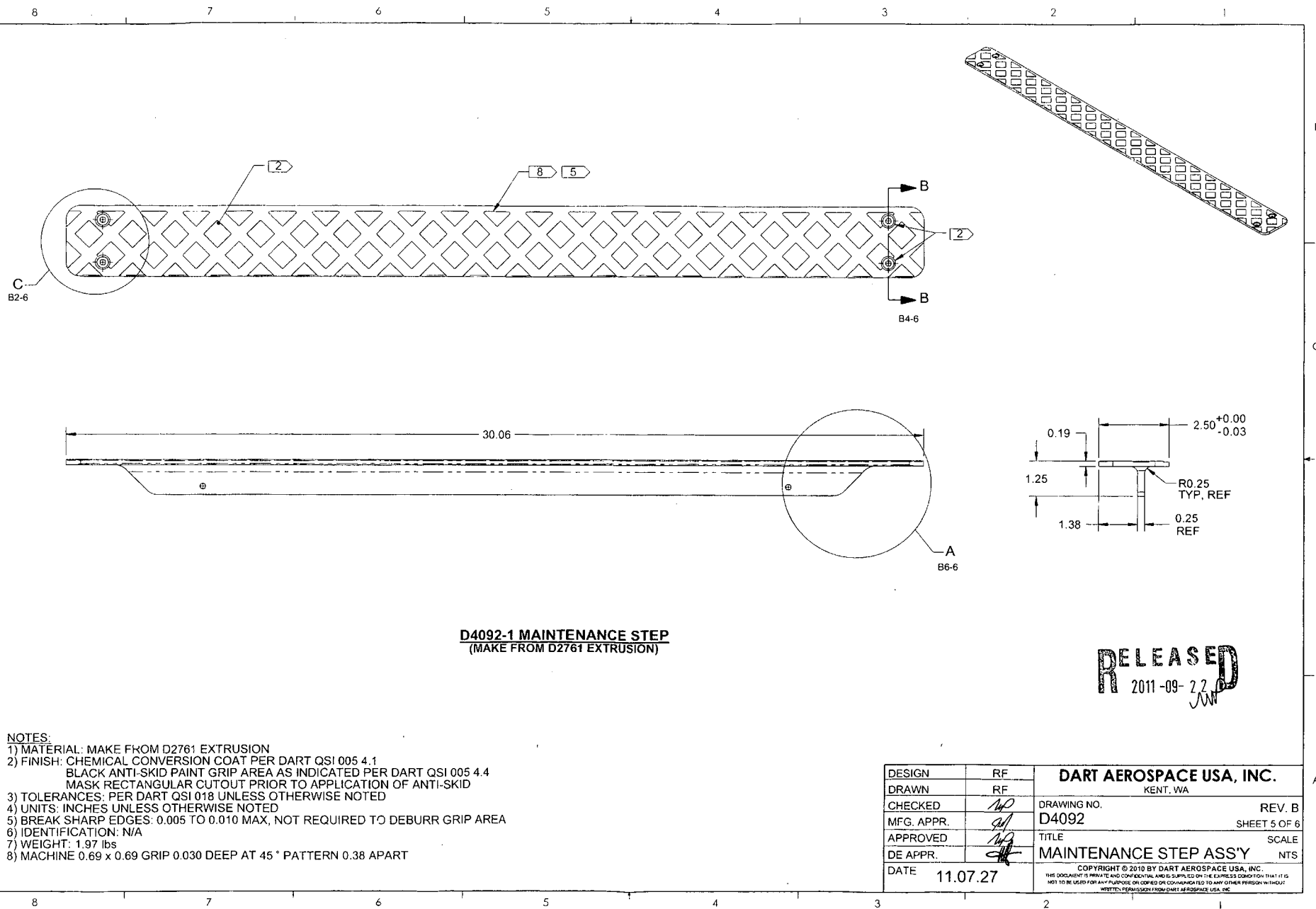
RELEASED
2011-09-22

D4092-042 MAINTENANCE STEP ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER QSI 044 6.1
- 7) WEIGHT: 5.37 lbs
- 8) TORQUE SCREWS UP TO 15-25 in-lb (1.7-2.8 N-m)
- 9) GRIP CUTOUT TOWARD CENTER

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>RF</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>RF</i>	D4092	SHEET 4 OF 6
APPROVED	<i>RF</i>	TITLE	SCALE
DE APPR.	<i>RF</i>	MAINTENANCE STEP ASS'Y	NTS
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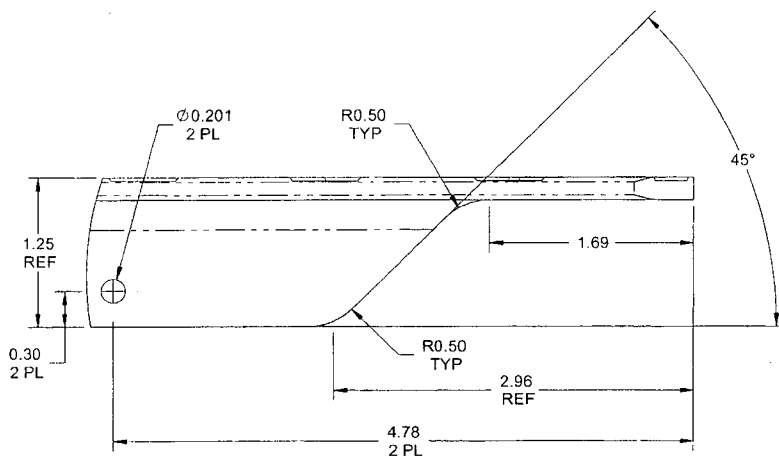
D4092-1 MAINTENANCE STEP
(MAKE FROM D2761 EXTRUSION)

RELEASED
2011-09-22
JW

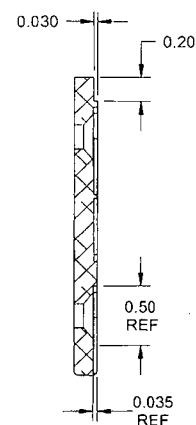
NOTES:

- 1) MATERIAL: MAKE FROM D2761 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
BLACK ANTI-SKID PAINT GRIP AREA AS INDICATED PER DART QSI 005 4.4
MASK RECTANGULAR CUTOUT PRIOR TO APPLICATION OF ANTI-SKID
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX, NOT REQUIRED TO DEBURR GRIP AREA
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.97 lbs
- 8) MACHINE 0.69 x 0.69 GRIP 0.030 DEEP AT 45° PATTERN 0.38 APART

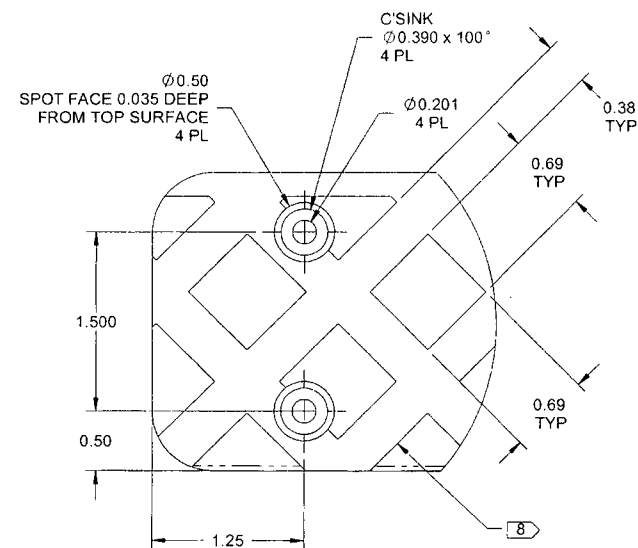
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	MP	DRAWING NO.	REV. B
MFG. APPR.	MP	D4092	SHEET 5 OF 6
APPROVED	MP	TITLE	SCALE
DE APPR.	MP	MAINTENANCE STEP ASS'Y	NTS
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DETAIL A B3-5
SCALE 3X, TYP



SECTION B-B C3-5
SCALE 3X, TYP



DETAIL C C8-5
SCALE 3X, TYP

RELEASED
2011-09-22
MWO

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. 8
MFG. APPR.	RF	D4092	SHEET 6 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	MAINTENANCE STEP ASS'Y	NTS
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